



· MOLOSSUS AUSTRALIS, Gray

J Gould and H C Richter del. et lith.

Hellmündel & Walton, Imp.

MOLOSSUS AUSTRALIS, *Gray*.

Australian Molossus.

Molossus australis, Gray in Mag. of Zool. and Bot., vol. ii. p. 501.—Gould in Proc. of Zool. Soc., July 27, 1858.

THIS large and truly singular species of Bat was described by Dr. Gray just twenty years ago, his description having appeared in the Number of the "Magazine of Zoology and Botany" for December 1838. The specimen from which Dr. Gray took his characters was then and still is the property of the United Service Institution, to whose museum it was presented by Major M'Arthur, with the word "Australia" written on the label attached to it; beyond this nothing was known respecting it, and up to this time it remains the only example in Europe. My thanks are especially due to the President and Council of this Institution for permission to take this rare and valuable specimen out of their cases for the purpose of figuring in the present work; this had been done and my drawing made, when, just on the eve of publication, an unexpected letter arrived from a friend in Australia, of which the following is a copy:—

"Melbourne, Victoria, May 12, 1858.

"DEAR SIR,—A few days ago I saw five Bats together in a hollow tree near this place. Not having seen them figured in your own or any other work, I thought it likely they might prove to be a new species. I therefore made a sketch of one of them for you, and if you think proper to publish it you are quite welcome so to do. I also leave it to you to name the animal. A short description I have the honour to send you.

"Dentition: incisors $\frac{1.1}{2.2}$, canines $\frac{1.1}{1.1}$, false molars $\frac{2.2}{2.2}$, true molars $\frac{3.3}{3.3} = \frac{14}{16} = 30$.

"For the admeasurements of the animal I refer you to the sketch, which is of the size of life. Colour of the body sepia-brown, the belly somewhat lighter; wings greyish brown; hand or hind-foot and the extremities, including the tail, black; the under side of the fore-arms whitish flesh-colour; the palm and wrist of the hand black, as if covered with gloves; between the elbows and the knees a pure white streak stretching towards the root of the tail; irregular white spots occur on the neck and chest in some of the specimens, in others the neck and belly are covered with large white patches; tragus and the ears, where free from hairs, black, the remainder clothed with dark rust-coloured hairs; on the upper margin of the ear a row of diminutive tubercles; eyes black; space surrounding the nostrils naked and black; under lip nude and of a blackish brown; thumb and fourth finger of the hind-foot thicker than the three middle ones, while a sort of fine brush covers the former; the thumb is shorter than the fingers, but all have on the top of the nail a small tuft of fine hairs; the tail is prolonged for more than an inch beyond the intra-femoral membrane; on the throat a sort of pouch stretching inwards and downwards nearly three-quarters of an inch, covered with two distinct tufts of stiff brown hairs growing on the bottom of the pouch, and resembling a couple of artist's brushes; when the pouch is not distended, only the extremity of the brushes are visible, and are scarcely distinguishable from the other hairs; the naked portion of the pouch is flesh-coloured; there is no communication between the pouch and the inner portion of the neck. The upper incisor teeth are rather large, and resemble canines; the lower ones are very minute; the upper first and second true molars are nearly equal, and have three sharp tubercles externally; the third is smaller, and has two pointed tubercles; the first and second of the lower true molars have five points on their crowns.

"I shall be very much pleased to receive a few lines stating your opinion of the Bat, and if I can serve you in any way connected with natural history.

"With all due respect,

"Yours obediently,

"LUDWIG BECKER."

The drawing which accompanied this letter accorded so nearly with the specimen in the United Service Museum as not to leave a shadow of doubt as to the animals discovered by Dr. Becker being identical with it; the tufts of hair and the pouch are, however, almost obsolete in the specimen, which is probably due to a difference in sex, or of the season at which it was killed.

On submitting Dr. Becker's letter and drawing to R. F. Tomes, Esq., who has paid great attention to the *Vespertilionidæ*, that gentleman favoured me with the following remarks:—

"Welford, Stratford-on-Avon, June 1858.

"MY DEAR SIR,—I have compared the drawing and description of the *Molossus Australis* with a great many species of that genus in spirit and prepared skeletons, and conclude most certainly that it is a

Molossus. The only doubt I had was whether the genus *Nyctinomus* of Isidore Geoffroy should properly be separated from the genus *Molossus* established by his father. In order to determine this, if possible, I have cleaned a number of specimens and instituted a minute comparison. The results scarcely justify a *sub-generic* difference. With respect to the gular pouch, that appears, so far as my specimens in spirit inform me, to be peculiar to the Australian species; but I strongly suspect that it will be found to be a peculiarity due to sex and age, perhaps even in some measure to season, rather than of generic value. In the genus *Taphozous* this gular sac is entirely dependent on the age and sex of the animal, and its absence or presence has been made use of as a specific character very improperly.

“It is not a little remarkable that this Australian species should possess characters (with the exception of the pouch) which are as similar to the European ones as to any other species. I have often been surprised that Australia does not furnish a single form among the Bats that are not common to nearly all the world besides; indeed, many of the species are found in the Indian islands, and, curiously enough, in *China*. A collection of Chinese Bats which I have lately examined consisted of Indian and Australian species. I have taken very great pains in the examination of the drawing, and have prepared skeletons of several species on purpose to compare them. I would strongly advise you to continue the name of *Molossus Australis*, and you may, if you like, add that the animal belongs to that division of the genus which has been designated *Nyctinomus*.

“Ever yours truly,

“R. F. TOMES.”

This, then, is all that I am at present able to communicate respecting the species, and it affords me much pleasure to furnish even this meagre account, for a more interesting animal I have not seen for some time.

The following is a description of the animal in the United Service Museum:—

Fur soft and dense, that of the upper surface of a deep reddish brown, and extending on to the basal parts of the limbs; fur of the under surface of a similar but much lighter hue, bordered on each side of the body by a broad fringe of white, which extends in a lesser degree on to the base of the lower limbs and the posterior part of the body; wing-membranes extremely thin, and presenting a silvery appearance; ears and face dark purplish brown.

Total length $6\frac{3}{4}$ inches; extent of the wings from tip to tip $15\frac{1}{4}$.

The figure is of the natural size.